```
Running
ContainerCreating
ContainerCreating
                                                                              (49s ago)
my-pod
my-rs-f5dlg
my-rs-hdkdv
                        1/1
0/1
0/1
0/1
0/1
                                                                                                   23s
23s
ny-rs-lqn4z
ny-rs-r2kgw
                                                                                                   23s
23s
                                      ContainerCreating
my-rs-r2kgw 0/1 ContainerCreating 0
arunesh@Arunesh:~$ kubectl apply re-test.yaml
error: Unexpected args: [re-test.yaml]
See 'kubectl apply -h' for help and examples
arunesh@Arunesh:~$ kubectl get pod -o wide
NAME READY STATUS RES'
my-pod 1/1 Running 1 (:
my-rs-f5dlg 0/1 ContainerCreating 0
my-rs-hdkdv 0/1 ContainerCreating 0
my-rs-lqn4z 0/1 ContainerCreating 0
                                                                                                    AGE
5h24m
78s
78s
                                                                          RESTARTS
                                                                                                                   IP
10.244.0.6
                                                                                                                                          NODE
minikube
                                                                                                                                                              NOMINATED NODE
                                                                                                                                                                                             READINESS GATES
                       1/1
0/1
0/1
0/1
0/1
my-pod
my-rs-f5dlg
my-rs-hdkdv
my-rs-lqn4z
my-rs-r2kgw
                                                                          1 (104s ago)
                                                                                                                                                               <none>
                                                                                                                                                                                             <none>
                                                                                                                                          minikube
minikube
                                                                                                                    <none>
                                                                                                                   <none>
                                                                                                                                                               <none>
                                                                                                                                                                                             <none>
                                      ContainerCreating
ContainerCreating
                                                                                                     78s
78s
                                                                                                                   <none>
                                                                                                                                           minikube
                                                                                                                                                              <none>
                                                                                                                                                                                             <none>
                                                                                                                                                               <none>
                                                                                                                    <none>
                                                                                                                                          minikube
                                                                                                                                                                                             <none>
                         h:~$ sudo nano deploy.yaml
h:~$ ls
arunesh@Arunesh:*% is deploy.yaml docker-compose.yaml pod.yml re-test.yaml simple-web-app arunesh@Arunesh:*$ kubectl apply -f deploy.yaml deployment.apps/my-deploy created service/my-service created arunesh@Arunesh:*$ minikube service my-service
   NAMESPACE
                                               TARGET PORT
                                                                                            URL
                              NAME
   default
                        my-service
                                                                        http://192.168.49.2:30002
      Starting tunnel for service my-serv
   NAMESPACE
                                               TARGET PORT
                             NAME
                                                                                        URI
   default
                       my-service
                                                                        http://127.0.0.1:34041
      Opening service default/my-service in default browser...
http://127.0.0.1:34041
Because you are using a Docker driver on linux, the terminal needs to be open to run it.

    Using image gcr.io/k8s-minikube/storage-provisioner:v5
    Enabled addons: default-storageclass, storage-provisioner
    Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default esh@Arunesh:~$ kubectl apply -f re-test.yaml

replicaset.apps/my-rs created
arunesh@Arunesh:~$ kubectl get pods
NAME READY STATUS
my-pod 1/1 Running
my-rs-f5dlg 0/1 ContainerCreating
                                                                                                           AGE
5h23m
15s
                                                                                 RESTARTS
my-pod
my-rs-f5dlg
my-rs-hdkdv
                          1/1
0/1
0/1
0/1
0/1
                                                                                 1 (41s ago)
                                           ContainerCreating
                                                                                                            15s
15s
 my-rs-lqn4z
                                          ContainerCreating
 my-rs-r2kgw
                                           ContainerCreating
                                                                                 0
                                                                                                            15s
                          sh:~$ kubectl get pods
READY STATUS
 NAME
                                                                                 RESTARTS
                                                                                                            AGE
                          1/1
0/1
0/1
0/1
0/1
 my-pod
                                          Running
ContainerCreating
                                                                                 1 (45s ago)
                                                                                                            5h23m
 my-rs-f5dlg
my-rs-hdkdv
                                                                                                            19s
                                           ContainerCreating
                                                                                                            19s
                                          ContainerCreating
ContainerCreating
                                                                                                            19s
 my-rs-lqn4z
                                                                                 0
 my-rs-r2kgw
                                                                                                            19s
                          sh:~$ kubectl get pods
READY STATUS
 NAME
                                                                                 RESTARTS
                                                                                                            AGE
                           1/1
0/1
0/1
                                          Running
                                                                                     (46s ago)
                                                                                                            5h23m
 my-pod
my-rs-f5dlg
my-rs-hdkdv
                                           ContainerCreating
                                                                                                            20s
                                           ContainerCreating
                                                                                                            20s
                           0/1
0/1
 my-rs-lqn4z
my-rs-r2kgw
                                          ContainerCreating
ContainerCreating
                                                                                                            20s
20s
                                                                                 0
                          sh:~$ kubectl get pods
READY STATUS
 NAME
                                                                                 RESTARTS
                                                                                                            AGE
                           1/1
0/1
                                                                                     (47s ago)
 my-pod
                                          Running
                                                                                                            5h23m
my-rs-f5dlg
my-rs-hdkdv
                                           ContainerCreating
                                                                                                           21s
                           0/1
0/1
0/1
                                           ContainerCreating
                                                                                                            21s
 my-rs-lqn4z
                                                                                                            21s
                                          ContainerCreating
ContainerCreating
                                                                                 0
 mv-rs-r2kgw
                                                                                                            21s
                           sh:~$ kubectl get pods
READY STATUS
                                                                                 RESTARTS
                                                                                                            AGE
 NAME
                           1/1
0/1
0/1
0/1
0/1
                                           Running
                                                                                                            5h23m
 my-pod
                                                                                     (47s ago)
my-rs-f5dlg
my-rs-hdkdv
                                           ContainerCreating
                                                                                 0
                                                                                                           21s
21s
                                           ContainerCreating
 my-rs-lqn4z
                                          ContainerCreating
ContainerCreating
                                                                                                            21s
21s
                                                                                 0
0
my-rs-r2kgw
```

```
arunesh@Arunesh:~$ Ls

DevOps docker-compose.yaml pod.yml re-test.yaml simple-web-app

arunesh@Arunesh:~$ kubectl apply -f re-test.yaml

error: error validating "re-test.yaml": error validating data: apiVersion not set; if you choose to ignore these errors, turn validation off with --validate

=false
  =false
arunesh@Arunesh:~$ cat re-test.yaml
kind: ReplicaSet
metadata:
name: my-rs
labels:
name: my-rs
    name: my

pec:

replicas: 4

selector:

matchLabels:

apptype: web-backend

template:

metadata:

labels:

apptype: web-backend
apptype: web-backend
spec:
containers:
- name: my-app
image: arunesh2005/simpleapplication
ports:
- containerPort: 8080

arunesh8Arunesh:-$ sudo nano re-test.yaml
[sudo] password for arunesh:
Sorry, try again.
[sudo] password for arunesh:
arunesh8Arunesh:-$ kubectl apply -f re-test.yaml
error: error validating "re-test.yaml": error validating data: failed to download openapi: Get "https://127.0.0.1:32769/openapi/v2?timeout=32s": dial tcp 12
7.0.0.1:32769: connect: connection refused; if you choose to ignore these errors, turn validation off with --validate=false
arunesh8Arunesh:-$ minikube start
inikube v1.35.0 on Ubuntu 24.04 (amd64)
Using the docker driver based on existing profile
Starting "minikube" primary control-plane node in "minikube" cluster
Pulling base image v0.0.46 ...
Restarting existing docker container for "minikube" ...
Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
Verifying Kubernetes v1.32.0 on Docker 27.4.1 ...
   arunesh@Arunesh:~$ ls
DevOps docker-compose.yaml simple-web-app
arunesh@Arunesh:~$ kubectl get pod -o wide
NAME READY STATUS RESTARTS AGE
my-pod 1/1 Running 0 9m47s
arunesh@Arunesh:~$ sudo nano pod.yml
                                                                                                                                                                                                                                                                                                                            NOMINATED NODE READINESS GATES
                                                                                                                                                                                                                                                                          NODE
                                                                                                                                                                                                              10.244.0.4 minikube
                                                                                                                                                                                                                                                                                                                            <none>
 arunesh@Arunesh:~$ sudo nano pod.yml
[sudo] password for arunesh:
arunesh@Arunesh:~$ sudo nano pod.yml
arunesh@Arunesh:~$ kubectl get pod
NAME READY STATUS RESTARTS AGE
my-pod 1/1 Running 0 60m
arunesh@Arunesh:~$ sudo nano pod.yml
arunesh@Arunesh:~$ kubectl get pod
NAME READY STATUS RESTARTS AGE
my-pod 1/1 Running 0 62m
arunesh@Arunesh:~$ kubectl get pod
NAME READY STATUS RESTARTS AGE
my-pod 1/1 Running 0 62m
arunesh@Arunesh:~$ kubectl exec -it my-pod
error: you must specify at least one command for the container
arunesh@Arunesh:~$ kubectl exec -it my-pod -- bin/bash
root@my-pod:/# l
   root@my-pod:/# l
bash: l: command not found
 bash: l: command not found
root@my-pod:/# ls
bin boot dev docker-entrypoint.d docker-entrypoint.sh etc home lib lib64 media mnt opt proc root run sbin
root@my-pod:/# cd usr
root@my-pod:/usr# ls
bin games include lib lib64 libexec local sbin share src
root@my-pod:/usr# cd local
root@my-pod:/usr# cd local
root@my-pod:/usr/local# ^C
root@my-pod:/usr/local# ^C
root@my-pod:/usr/local# exit
exit
```

```
h@Arunesh:~$ kubectl describe pod my-pod
                                                       my-pod
default
 Name:
 Namespace:
 Priority:
Service Account:
                                                       default
                                                       minikube/192.168.49.2
Thu, 20 Mar 2025 04:39:31 +0000
 Node:
 Node:
Start Time:
Labels:
                                                       run=my-pod
  Annotations:
                                                        <none>
  Status:
                                                       Running
                                                        10.244.0.4
  IP:
  IPs:
                     10.244.0.4
       IP:
  Containers:
       my-pod:
Container ID:
                                                             docker://e576710bd5e50daae7808cda39897f65f59820e3e478636c684a945b9c7a1136
                                                             nginx docker-pullable://nginx@sha256:124b44bfc9ccd1f3cedf4b592d4d1e8bddb78b51ec2ed5056c52d3692baebc19
              Image:
              Image ID:
                                                             80/TCP
             Host Port:
                                                             0/TCP
                                                             Thu, 20 Mar 2025 04:40:52 +0000
True
              State:
                  Started:
             Ready:
              Restart Count:
              Environment:
                                                             <none>
              Mounts:
                     /var/run/secrets/kubernetes.io/serviceaccount from kube-api-access-m7tf8 (ro)
  Conditions:
       Type
PodReadyToStartContainers
Initialized
                                                                                            Status
                                                                                           True
                                                                                            True
       Ready
ContainersReady
                                                                                            True
        PodScheduled
  Volumes:
       kube-api-access-m7tf8:
                                                                                        Projected (a volume that contains injected data from multiple sources)
              TokenExpirationSeconds:
 arunesh@Arunesh:~$ kubectl run my-pod --image=nginx --port=80
pod/my-pod created
                           unesh: A Rubect get node
unesh: $\forall kubect get node
unesh: $\forall kubect get node
STATUS ROLES AGE V
Ready control-plane 22h v
unesh: $\forall kubect get pod
READY STATUS RESTAR
3/1 ContainerCreating 0
runesh: $\forall kubect get pod -0 wide
READY STATUS RESTARTS AGE
1/1 Running 0 945
 minikube
                                                                                                                  v1.32.0
                                                                                                    RESTARTS
 my-pod
                         0/1
                                                                                                                                  61s
arunesh@Arunesh:~$ kubectl get pod -o wide

NAME READY STATUS RESTARTS AGE IP NODE NOMINATED NODE READINESS GA
my-pod 1/1 Running 0 94s 10.244.0.4 minikube <none> <none>
arunesh@Arunesh:~$ kubectl logs my-pod
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Sourcing /docker-entrypoint.d/15-local-resolvers.envsh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2025/03/20 04:40:52 [notice] 1#1: using the "epoll" event method
2025/03/20 04:40:52 [notice] 1#1: built by gcc 12.2.0 (Debian 12.2.0-14)
2025/03/20 04:40:52 [notice] 1#1: built by gcc 12.2.0 (Debian 12.2.0-14)
2025/03/20 04:40:52 [notice] 1#1: start worker process 29
2025/03/20 04:40:52 [notice] 1#1: start worker process 30
2025/03/20 04:40:52 [notice] 1#1: start worker process 31
2025/03/20 04:40:52 [notice] 1#1: start worker process 32
2025/03/20 04:40:52 [notice] 1#1: start worker process 32
2025/03/20 04:40:52 [notice] 1#1: start worker process 34
2025/03/20 04:40:52 [notice] 1#1: start worker process 35
2025/03/20 04:40:52 [notice] 1#1: start worker process 37
2025/03/20 04:40:52 [notice] 1#1: start worker process 39
2025/03/20 04:40:52 [notice] 1#1: start worker process 39
2025/03/20 04:40:52 [notice] 1#1: start worker process 39
2
                   Ь@Δ
                                                                                                                      IP
10.244.0.4
                                                                                                                                                        NODE
minikube
                                                                                                                                                                                        NOMINATED NODE
                                                                                                                                                                                                                                     READINESS GATES
     31°C
                                                                                                                                                                         Q Search
```























```
runesh@Arunesh:~$ minikube start
        minikube v1.35.0 on Ubuntu 24.04 (amd64)
         Using the docker driver based on existing profile
        Starting "minikube" primary control-plane node in "minikube" cluster Pulling base image v0.0.46 ...
Restarting existing document of "minikube" ...
  95
        Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...
        Verifying Kubernetes components...
• Using image gcr.io/k8s-minikube/storage-provisioner:v5
        Enabled addons: storage-provisioner, default-storageclass
Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
  arunesh@Arunesh:~$ kubectl get pod
 No resources found in default namespace.
  arunesh@Arunesh:~$ docker images
                                                                                          IMAGE ID
                                                                                                                      CREATED
                                                                                                                                                  SIZE
                                                                                                                      17 hours ago
17 hours ago
 arunesh2005/simpleapplication
                                                                                          8496158145dd
                                                                                                                                                  326MB
                                                             latest
 arunesh2005/simpleapplication
                                                                                          d934fb48852e
                                                             <none>
                                                                                                                                                  326MB
                                                                                          8918adc2891d
                                                                                                                      17 hours ago
                                                             <none>
 <none>
                                                                                                                                                  326MB
                                                                                          76435f253459
                                                                                                                      17 hours ago
 <none>
                                                             <none>
                                                                                                                                                  326MB
                                                                                          b317a1109b7f
                                                                                                                      17 hours ago
17 hours ago
 <none>
                                                             <none>
                                                                                                                                                  326MB
 <none>
                                                             <none>
                                                                                          942535685e8e
                                                                                                                                                  326MB
                                                                                                                      17 hours ago
 <none>
                                                             <none>
                                                                                          8a4a596c9091
                                                                                                                                                  326MB
 <none>
                                                             <none>
                                                                                          e460c86021a1
                                                                                                                      18 hours ago
                                                                                                                                                  326MB
                                                                                          079f5d5095b2
  <none>
                                                             <none>
                                                                                                                      18 hours ago
                                                                                                                                                  326MB
 <none>
                                                                                          a4c6c5329cc8
                                                             <none>
                                                                                                                      18 hours ago
                                                                                                                                                  326MB
 <none>
                                                             <none>
                                                                                          85f479806b0f
                                                                                                                      18 hours ago
                                                                                                                                                  326MB
                                                                                          7b2dbb1b307e
                                                                                                                      18 hours ago
                                                             <none>
                                                                                                                                                  326MB
 <none>
                                                                                          6a44d1dd2d60
 jenkins/jenkins
                                                                                                                      2 weeks ago
                                                             lts
                                                                                                                                                  468MB
                                                                                          53a18edff809
                                                                                                                      6 weeks ago
 nginx
                                                             latest
                                                                                                                                                  192MB
                                                                                          fa262c3a6564
                                                                                                                      8 weeks ago
                                                                                                                                                  797MB
 mysql
                                                             latest
                                                                                                                                                 10.1kB
1.31GB
                                                                                          74cc54e27dc4
                                                                                                                      8 weeks ago
 hello-world
                                                             latest
                                                                                                                      2 months ago
 kicbase/stable
                                                             v0.0.46
                                                                                          e72c4cbe9b29
 openjdk
                                                             17-jdk-alpine
                                                                                          264c9bdce361
                                                                                                                      3 years ago
                                                                                                                                                  326MB
 arunesh@Arunesh:~$ kubectl run my-pod --image=nginx --port=80
 pod/my-pod created
  arunesh@Arunesh:~$ kubectl get node
                      STATUS
                                      ROLES
                                                                    AGE
                                                                               VERSION
 minikube
                     Ready
                                      control-plane
                                                                    22h
                                                                               v1.32.0
arunesh@Arunesh:~$ minikube start

minikube v1.35.0 on Ubuntu 24.04 (amd64)

Using the docker driver based on existing profile

Starting "minikube" primary control-plane node in "minikube" cluster

Pulling base image v0.0.46 ...

Restarting existing docker container for "minikube" ...

Preparing Kubernetes v1.32.0 on Docker 27.4.1 ...

Verifying Kubernetes components...

Using image gcr.io/k8s-minikube/storage-provisioner:v5

Enabled addons: storage-provisioner, default-storageclass

Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default arunesh@Arunesh:~$ kubectl get pod

No resources found in default namespace.

arunesh@Arunesh:~$ docker images

REPOSITORY

TAG IMAGE ID CREATED SIZE
                       -$ minikube start
                                                                                          CREATED

17 hours ago
18 hours ago
18 hours ago
REPOSITORY arunesh2005/simpleapplication arunesh2005/simpleapplication
                                                                     IMAGE ID
8496158145dd
                                                                                                                SIZE
326MB
326MB
                                               TAG
                                                                     d934fb48852e
8918adc2891d
76435f253459
                                               <none>
                                                                                                                326MB
326MB
 <none>
                                               <none>
 <none>
                                                                     b317a1109b7f
942535685e8e
8a4a596c9091
                                                                                                                326MB
326MB
326MB
                                               <none>
                                               <none>
 <none>
                                               <none>
                                                                     e460c86021a1
079f5d5095b2
                                                                                                                326MB
326MB
 <none>
                                               <none>
 <none>
                                               <none>
                                                                     a4c6c5329cc8
85f479806b0f
7b2dbb1b307e
                                                                                           18 hours ago
18 hours ago
18 hours ago
 <none>
                                               <none>
                                                                                                                 326MB
                                                                                                                326MB
326MB
                                               <none>
  <none>
                                               <none>
                                               lts
latest
                                                                     6a44d1dd2d60
53a18edff809
                                                                                           2 weeks ago
6 weeks ago
                                                                                                                468MB
192MB
 jenkins/jenkins
 nginx
mysql
hello-world
hello-world latest fa26 kicbase/stable v0.0.46 e72c openjdk arunesh@Arunesh:-$ kubectl run my-pod --image=nginx pod/my-pod created arunesh@Arunesh:-$ kubectl get node NAME STATUS ROLES AGE VERSION minikube Ready control-plane 22h v1.32.0
                                                                                           8 weeks ago
8 weeks ago
2 months ago
                                                                                                                797MB
10.1kB
1.31GB
326MB
                                               latest
                                                                     fa262c3a6564
                                                                     74cc54e27dc4
e72c4cbe9b29
                                                                     264c9bdce361
```